



DR-512 DMX Recorder

ORDERCODE 50820



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Thank you!



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WARNING



CAUTION!
Keep this device away from rain and moisture!



**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual



**CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!**



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Do not open the device and do not modify the device.
- Do not insert objects into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this would reduce the device's life.
- Only use device indoor, avoid contact with water or other liquids.
- Avoid flames and do not put close to flammable liquids or gases.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the device and the power-cord from time to time.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.

- Repairs, servicing and electric connection must be carried out only by Showtec.
- For replacement use fuses of same type and rating only.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- WARRANTY: Till one year after date of purchase.

OPERATING DETERMINATIONS

This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.

Any other operation may lead to dangers like short-circuit, burns, electric shock, lamp explosion, crash etc.

You endanger your own safety and the safety of others!

Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.

Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	FASE
N	BLUE	BLACK	SILVER	NUL
	YELLOW/GREEN	GREEN	GREEN	EARTH

Make sure that the device is always connected properly to the earth!

⚠ Return Procedure ⚠

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:

- 1) Your name
- 2) Your address
- 3) Your phone number
- 4) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any shortcomings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

Description of the device

Features

The DR-512 DMX Recorder is a DMX recorder from Showtec and features:

- Professional DMX recorder, access to internal memory and CF card.
- 4 sequences (I01-I04) + Startup + Shutdown, available for memory.
- 33 sequences (E01-E33) available for CF card use.
- Capable of PLAY, PAUSE and STOP functions.
- Manual / Autostart / DMX monitor / DMX trigger / Program / Setup mode.
- 24 / 25 / 30 frames SMPTE signal available.
- 32 MB CF card is recommended.
- DMX 3Pin input/output, SMPTE 3Pin input/output, 9Pin connector.
- Line remote control recalls PLAY, STOP and RECORD functions.
- 2 x 16 characters LCD screen.

NOTE:

Knowledge of DMX is required to fully utilize this unit.

Overview



Fig. 1

1. Power Switch:

To switch the device ON/OFF.

2. CF card port:

This port is for external storage of recorded programs on a CF card.

3. LCD-Display:

This display shows all actions (menus, settings and values), depending on the chosen function.

4. DOWN button:

Press this button to scroll through the functions or decrease a certain value.

5. ENTER button:

Press ENTER to confirm your operation or enter a menu.

6. CARD button:

Press this button to switch between the internal storage and CF card storage.

LED ON means CF card operation is available, LED OFF means internal operation is available.

7. SHUTDOWN button:

Press this button to activate the SHUTDOWN function.

8./9./10. PLAY/PAUSE/STOP buttons :

These three buttons are used for flow control. By pushing one of these buttons the sequence can be started, paused or stopped.

11. RECORD button:

In PROGRAM mode, the recording of a new sequence can be started by pressing the RECORD button. First you should choose a sequence, then push the RECORD button and start the recording with the PLAY or PAUSE button.

12. UP button:

Press this button to select a certain option or increase a certain value.

13. NEXT button:

Use this button to select an internal sequence or help to change a sequence name.

14. DMX indicator:

When the LED is ON, means the device is receiving a DMX signal. When the LED is OFF, then there is no DMX signal.

15. Mode button:

Press this button to select different modes (MANUAL, AUTOSTART, DMX MON, DMX TRIGGER, PROGRAM and SETUP modes available).

16. STARTUP button:

Press this button to activate the STARTUP function.

17. 1-4 Sequence buttons:

Select a certain sequence (I01-I04).

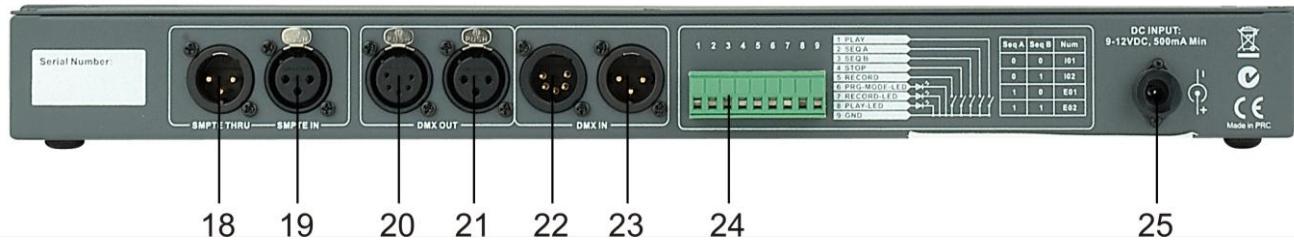


Fig. 2

18+19. SMPTE output / input:

Used to output / input SMPTE signals via this port.

20+21. DMX output (5pin / 3pin):

To output relative DMX signals.

22+23. DMX input (5pin / 3pin):

To input relative DMX signals.

24. Terminal connector:

Used to connect with external terminals.

25. DC input:

Used to plug in an external power supply (DC 9-12V, 500 mA Min).

Installation

Remove all packing materials from the DR-512 DMX Recorder. Check that all foam and plastic padding is removed. Screw the equipment into a 19" rack. Connect all cables.

Always disconnect from electric mains power supply before cleaning or servicing.

Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

LCD Display



- I means **internal**, while E means **external**, and the following **01~33** means one of the sequence numbers.
- The characters in the middle of the first line of the LCD stand for MANUAL, AUTOSTART, DMX MON, DMX TRIGGER, PRG MODE or SETUP mode.
- Press **PLAY**; in the top right corner of the LCD ► will appear.



Press **PAUSE**; in the top right corner of the LCD II will appear.



Press **STOP**; in the top right corner of the LCD ■ will appear.



- In the second display line, **Sh01** is one of the Sequence names. This can only be changed in PROGRAM mode by pressing the **Enter** button. But on the other hand, the **StUp** (START UP) and **StDN** (SHUTDOWN) cannot be changed.
- When the LCD shows “ : : ” (Hour, Minute, Second), means the time of internal storage. When the LCD shows “ : : : ” (Hour, Minute, Second, Frame), means the **SMPTE** time. The time-display pattern can be switched through **Sys Time** in SETUP mode.

MANUAL mode

- This mode allows the most freedom to operate this unit. The user can select any one of the sequences (I01/I04) at any time to run, pause or stop the current sequence. The user can also start a specific sequence at STARTUP and SHUTDOWN.
- For internal storage, select one of the I01-I04 sequences and press the PLAY button to run the sequence. This sequence will run continuously unless you press the PAUSE or STOP button.
- For internal storage, press the STARTUP button, then the STARTUP sequence will run once and other sequences will run continuously.
- When the SHUTDOWN button is pressed, the SHUTDOWN sequence will run once and other sequences will be stopped.
- For external storage, press the CARD button. The corresponding LED will light up, indicating you have entered the CF card operation.

The CF card should first be formatted in FAT32 format.

The UP / DOWN buttons can be used to choose the desired sequences. The PLAY / PAUSE / STOP buttons can be used to control the running of the sequences. When the sequence is stopped, press the CARD button for a second time to return to internal operation.

- If a selected sequence does not exist, the PLAY function will not be effective.
- In MANUAL mode NEXT, ENTER and RECORD functions are disabled.

STARTUP and SHUTDOWN sequences are often used to activate Lamp ON/Lamp OFF triggers

AUTOSTART mode

- In AUTOSTART mode, the foregoing recorded sequences can be repeated automatically (With the CF card, the STARTUP and SHUTDOWN functions are not automatic and therefore will not be triggered). While a sequence is running, press the STOP button to SHUTDOWN the sequence. When it stops running, all sequences will be stopped.
- AUTOSTART can be executed once. After the STARTUP sequence is finished, the selected sequences will run automatically and the corresponding operation can be done manually. When you press the STOP button, the SHUTDOWN sequence will run within a cycle.
- STARTUP and SHUTDOWN sequences cannot be operated manually in this mode, they can only automatically run after respectively pressing the PLAY and STOP buttons.
- AUTOSTART can be repeated the next time the unit restarts.

DMX MON mode

- In this mode, DMX signals can be monitored. When the DMX signals are disabled, this unit can initiate a prepared system to enable the pre-selected sequences.
- When there is an effective signal input, the DMX indicator will light up, and the signal (DMX Thru) will be sent out through this unit. If the signal is missing, STARTUP and the selected sequences will start automatically. Pressing the STOP button will stop the running sequences. After the SHUTDOWN sequence runs, all the operation will be finished.
- This unit can only check the effective DMX signals. If there is no data input, the preselected sequences will run normally.
- STARTUP and SHUTDOWN sequences cannot be operated manually in this mode. And the AUTOSTART mode may be available for reference to the operation in MANUAL mode.
- Once an effective DMX signal is received, the running sequences will stop automatically. The PLAY, PAUSE and STOP buttons will not function.
- Should the DMX signals be disabled, the operation can be done manually.

DMX TRIGGER mode (used with external controller)

- In this mode, the first four DMX channels (CH1 - CH4) can be used to respectively control I01 - I04 sequences. I01- I04 sequences will run when the DMX level of each relative channel $\geq 20\%$. These sequences will stop running when the corresponding level $< 20\%$.
- The DMX trigger will only operate when it is receiving a DMX signal.
- Sequences (including STARTUP and SHUTDOWN) can be operated manually in DMX TRIGGER mode.

PROGRAM mode

In this mode, each sequence can be recorded and the sequence name can also be changed.

Recording operation

- Select the sequence to be recorded (including the internal sequences and the external sequences).
Remember: The CF card must be formatted before use.
- Check the DMX indicator. When the corresponding LED is ON, the unit is receiving a DMX signal.
When the LED is OFF, the unit is not receiving a DMX signal.
- Press the RECORD button, the sequence control will be paused, and the corresponding data will be erased.
- Press the PAUSE or PLAY button to record. You can press the STOP button to stop the operation at any moment you want.
- Warning: during operation, please do not turn off the unit, otherwise the recorded data will be lost.

Changing the sequence name

- When the unit is stopped In PRG Mode, press the ENTER button to enter the menu. An underline will appear in the bottom left corner of the LCD-display.
- Press the NEXT button to move one character ahead and use UP/DOWN buttons to change the corresponding characters. Press ENTER to confirm your operation.
- The Smpte time will not change when changing the sequence name.

SETUP mode

You can select 7 different options in SETUP mode.

- 1) **Smpte Trig:** Enter this menu to trigger the Smpte signals and to set the trigger time.

Press the NEXT button and use the UP / DOWN buttons to choose Yes or No (Y/N). Press the ENTER button to enter the trigger time setting mode.



There are 8 Trigger times you can change, for sequences I01 - I04 and sequences E01 - E04. The interval between two Trigger Times is at least 2 seconds. If the Trigger time is zero, the Trigger time is not set.

- 2) **Smpte Rec:** In this mode you can enable or disable the Smpte Record function.

Press the NEXT button and then use the UP / DOWN buttons to choose ON.

- 3) **Smpte Frame:** In this mode you can set the frame levels of the Smpte time.

24/25/30 frames are available.

The preset level must be identical with the frame level of the received Smpte signals.

- 4) **Sys Time:** This mode is used to set the system time for internal or external operation.

Press the NEXT button and then use the UP / DOWN buttons to choose the option **IN** or **EXT**.

- 5) **Format Card:** Use this submenu to format the CF card. Press the NEXT button and then use the UP / DOWN buttons to choose Yes or No (Y/N). Before formatting, please choose **Y** and then press ENTER to format the CF card.

- 6) **First Trigger Time:** This item is related with **Smpte Trig** and **Smpte Rec**.

In this mode, the user can see the current recorded Smpte trigger time. the First trigger point can be accessed after the Smpte signals have been triggered and the corresponding trigger time has been set. The Smpte trigger time can be recorded **ONLY**, when not all the DMX levels are at zero.

- 7) **Lock Program:** In this menu you are able to lock or unlock the PRG mode.

The LCD will show Yes or No (Y / N). Choose your option and press ENTER to confirm.

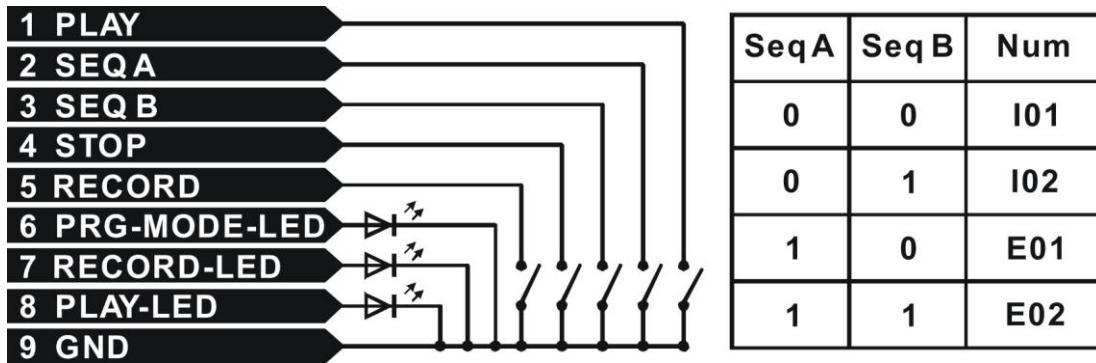
The LCD will display **Lock Program!** or **Unlock Program!**. If you choose **Y**, the Program mode will be in hidden state.

External Terminals

The following flowchart shows, SeqA and SeqB can be used to realize the remote control upon I01/I02/E01/E02. The PLAY, STOP and RECORD buttons can be used to control the running states.

Some information about Prg-mode LED, Record LED and Play LED:

In PRG mode, the **Prg-mode LED** will be ON. When the internal **Record LED** is ON, the external Record LED will also light up. And when the internal **Play LED** is ON, the external Play LED will light up, too.



Note: In the previous table, **1** means the switch is ON, while **0** means OFF.

Information for usage

- The CF card must be either put in, or taken out of the unit before turning on the machine. Otherwise, this will result in malfunction. The device only uses a 32MB CF card. If the card is new, it should be formatted before use.
- Choose your desired settings in SETUP mode, and press ENTER to confirm and save your settings. Generally speaking, the corresponding sequences in different modes can only be stored through mode switching.
- The STARTUP and SHUTDOWN function is only available during internal operation. During CF card operation, the STARTUP and SHUTDOWN functions will be disabled.
- If something goes wrong during operation, you can restart the unit by pressing and holding down the SHUTDOWN and RECORD buttons.

WARNING: When doing this restart operation, all recorded data will be cleared.

Maintenance

The Showtec DR-512 DMX Recorder requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.

Keep connections clean. Disconnect electric power, and then wipe the DMX and audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

Showtec DR-512 DMX Recorder

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

- **Problem 1: The Program mode is skipped during mode switching.**

Cause: In order to protect the data and prevent it from being erased, the Program mode has been locked.

Solution: Press the MODE button to enter the SETUP mode, select submenu 7 choose **N** for unlocking.

- **Problem 2: Nothing happens when the PLAY button is pushed.**

Cause: Because the selected Sequence does not exist.

Solution: The sequence must first, be recorded and then you should be able to play it.

- **Problem 3: Nothing happens when the RECORD button is pushed.**

Cause: Because recordings can only be made in the Program mode.

Also check if the unit is receiving a DMX signal.

Solution: Switch to Program mode and make sure that the DMX signal input is OK.

- **Problem 4: Nothing happens when the PLAY or PAUSE button are pushed while recording data in Program mode.**

Cause: Because there is no vacant space for recording.

Solution: Delete useless data to have more space for recording purposes.

- **Problem 5: Nothing happens when pushing the STARTUP or SHUTDOWN button.**

Cause: These two buttons can't be used freely in every operation mode.

They can only be used in MANUAL mode, DMX TRIGGER mode or PROGRAM mode.

In other modes, they are controlled automatically.

Solution: Select a mode that allows the use of the STARTUP and SHUTDOWN function.

- **Problem 6: Sequences cannot be triggered in TRIGGER mode when operating.**

Cause: Sequences can only be triggered when the unit is receiving a DMX signal.

Solution : Be sure the DMX indicator is ON. When the indicator is ON, the unit is receiving a DMX signal.

Product Specification

Model: Showtec DR-512 DMX Recorder

Power input : AC 100V-240V, 50/60Hz, 40W

Power supply: DC 9-12V, 500mA

Fuse: F 500mA 250V 5×20mm

CF Card Requirement: Only 32 MB

(Binary coded) switch input: 0~5V (no external voltage) /1mA

LED output (Prg-mode LED / Record LED / Play-LED): 2V / 25mA

4 sequences (I01-I04) + Startup + Shutdown, available for memory.

33 sequences (E01-E33) available for CF card use.

Capable of PLAY, PAUSE and STOP functions.

Manual / Autostart / DMX monitor / DMX trigger / Program / Setup mode.

24 / 25 / 30 frames SMPTE signal available.

DMX 3Pin input/output, SMPTE 3Pin input/output, 9Pin connector.

Line remote control recalls PLAY, STOP and RECORD functions.

2 x 16 characters LCD screen.

Dimensions: 482 x 120 x 45 mm (LxWxH)

Weight : 1,6 kg

Design and product specifications are subject to change without prior notice.



Website: www.Showtec.info

Email: service@highlite.nl



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